



Supplement to Gates Revisited Bulletin



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Military Traffic Management Command Transportation Engineering Agency
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Concrete Barrier Placements and Arresting Devices

INTRODUCTION

Concrete barrier placements are commonly used to prevent high-speed, unauthorized vehicular entry through an installation gate. Arresting devices, which are typically centered on the roadway to stop traffic, have become commonplace to protect against this threat as well. Since they are placed within the travel way, these security measures introduce hazards to the motorist. To minimize these hazards, proper placement and adequate warning through signs and markings are essential. This special supplement is intended to provide guidance on how to address these safety issues.

CONCRETE BARRIER PLACEMENTS

Concrete barrier placements are discouraged on approaches to installation gates. Exposed blunt ends of concrete barriers present a hazard to traffic flow and motorists' safety. However, installations often see it as the only temporary means of controlling traffic before a permanent fix can be installed. To date, there has been little guidance on the suitability, layout, spacing, and delineation of barrier placements resulting in potential traffic safety and operational conflicts.



Common problems encountered at many military installations include:

- ❖ No warning signs of approaching speed reduction.
- ❖ Exposed barrier blunt ends.
- ❖ Barrier openings permitting a "straight-line" path.
- ❖ Barriers spaced too close resulting in conflicts with larger vehicle turning paths.
- ❖ Little or no delineation of the travel paths.



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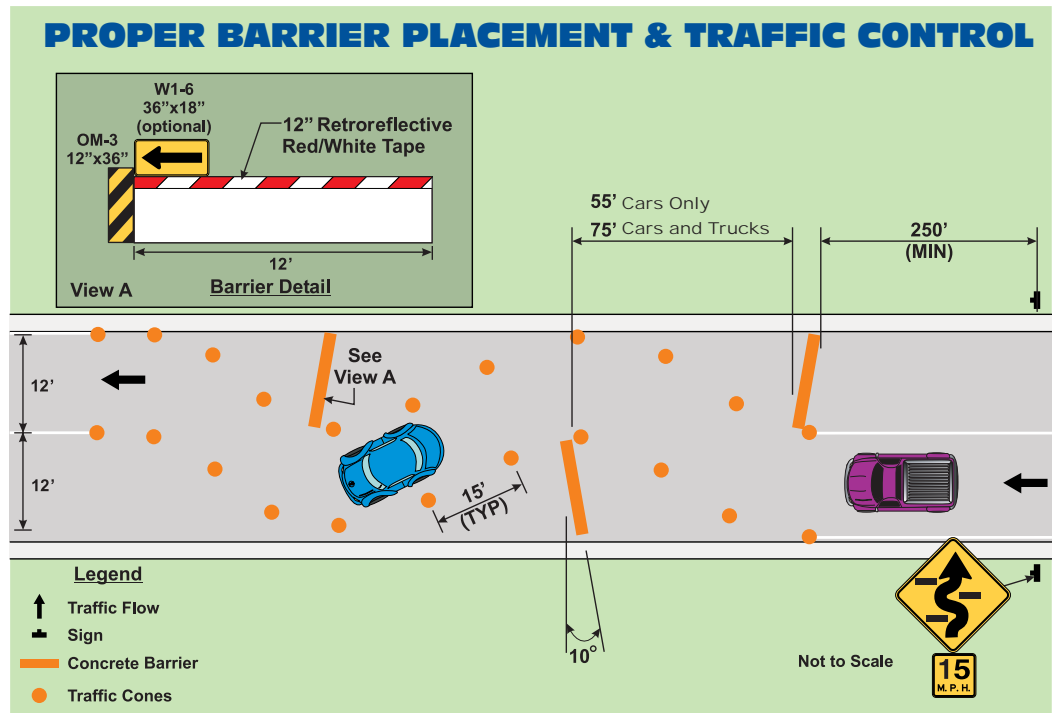
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The diagram at right shows the proper barrier spacing and orientation that will accommodate a WB-50 tractor trailer while still providing the desired level of speed reduction.

Delineation of barrier is often nonexistent, making it particularly difficult to negotiate a vehicle through the configuration at night. Red and white retroreflective tape should be installed, as shown above, to improve barrier visibility. Additional warning signs should be installed at least 250 feet before the first barrier.



ARRESTING DEVICES

The use of arresting devices is becoming quite common. These devices are often improperly delineated. They are marked with yellow along with either white or black diagonal stripes. The use of red and white stripes is more appropriate because of the stop condition that is required for the impact hazard (Figures 9.25 and 9.26 in *AASHTO Roadside Design Guide*, 2002). Additionally, since these devices are typically centered within the travel way, the diagonal striping should point down and outward from the center of the device. If located only on one side of moving traffic, the striping should point downward toward the traffic. Examples of nonstandard and standard arresting devices are shown.



Improper orientation and colors



Correct orientation, improper colors



Correct orientation, and colors